

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 January 2004 (15.01.2004)

PCT

(10) International Publication Number
WO 2004/005234 A2

(51) International Patent Classification⁷: C07C 51/00

(74) Agent: WISHART, Ian, Carmichael; Johnson Matthey
Technology Centre, Blounts Court, Sonning Common,
Reading RG4 9NH (GB).

(21) International Application Number:
PCT/GB2003/002843

(22) International Filing Date: 2 July 2003 (02.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0215384.9 4 July 2002 (04.07.2002) GB

(71) Applicants (for all designated States except US): JOHN-
SON MATTHEY PUBLIC LIMITED COMPANY
[GB/GB]; 2-4 Cockspur Street, Trafalgar Square, London
SW1 5BQ (GB). AUBIN LIMITED [GB/GB]; Unit 1,
Castle Street, Castlepark Industrial Estate, Ellon AB41
9RF (GB).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, HR,
HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,
SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MURRAY, James
[GB/GB]; 53 Anderson Drive, Aberdeen AB15 4UA (GB).
TOBIN, Edmund, Austin [IE/GB]; Burnshangie House,
Strichen, Aberdeenshire AB43 4XY (GB). WARREN,
Stephen, Geoffrey [GB/GB]; 5 Ermine Close, Royston,
Herts SG8 5EE (GB).

Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: IMPROVEMENTS IN METAL SALTS

(57) Abstract: Alkali metal carboxylate salt brines, such as cesium formate brine, are used in oil and gas drilling procedures. Con-
tamination with chloride ions can be controlled by treatment with a silver salt solution, and removing silver chloride formed. High
density brines can be obtained, suitable for re-use.

WO 2004/005234 A2